Pest Update (September 22, 2010)

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Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of dying plants or insect from other states. If you live outside of South Dakota and have a question, please send a digital picture of the pest or problem instead. **Walnut samples may not be sent in from any location – please provide a picture instead**.

Available on the net at:
http://sdda.sd.gov/Forestry/Educational-Information/PestAlert-Archives.aspx

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Current concerns

I have received a number of questions about yellowing foliage on pines, arborvitaes and junipers. If you notice the three-year old needles on a pine turning yellow at this time of year, don't worry its normal. Evergreen does not mean "forever green" and pines shed their older needles at this time of year. Spruces do this as well but for them it is the five- to seven-year old needles that are shed and the color change is not nearly as noticeable. Junipers and arborvitaes also go through a color change at this time of year but the loss appears more as strips or ribbons running through the shrub rather than only the interior scales becoming yellow.

Information you can use

This is the time of year when I get lots of questions about eating those 'chestnuts' that are falling everywhere. This is one picture of these fruits sent in by a County Educator, but I am getting them almost every day. First, these are not chestnuts. The American chestnut (*Castanea dentata*) is not adapted to our state's growing conditions and there are very few in the state. There are few American chestnuts anywhere due to the disease Chestnut blight that entered the country from Asia in 1904 and almost eliminated the species – once one of the most common trees in the Eastern Deciduous Forest – within 50 years. The Chinese chestnut (*C. mollissima*) is even less hardy and I do not know of any in South Dakota or western Minnesota. The Chinese chestnuts planted at the Minnesota Horticulture Research Center near the Twin Cities have been short-lived.

What people bring or send in as chestnuts are usually nuts from the buckeye tree (*Aesculus glabra*). This is a common tree in our region since the squirrels plant them for free in almost every garden. The nut contains the poisonous glycosides aesculin and fraxin. Ingesting the raw seed can result in muscle twitching, vomiting and abdominal pain, diarrhea and death. The raw nuts, tender shoots and leaves, particularly wilted leaves, are also toxic to horses and cattle (rabbits too but they seem to be smart enough not to eat them). Squirrels seem to do just fine eating the raw nut and it apparently contains a sweetener that (at least to a squirrel) is sweeter than sugar. The nut can be made safe for human

consumption by roasting and leaching and they were used as a starchy food by Native American but I do not recommend even trying to do this.

Acorns are beginning to litter the ground beneath the bur oaks in our state (and the occasional red oak as shown in the picture) so it's not too surprising if some folks wonder if they can start a tree from them. Actually it is fairly easy to do. First collect the acorns from the ground, not from the tree. They are not usually mature until they fall. However, do not wait too long to gather them as you have a lot of completion from squirrels and birds. Next examine the gathered acorns and discard any that have small holes (indication of weevil damage) or obvious decay. Place the ones that pass this test into a bucket of water and discard any that float to the top. The ones that are left have a good chance of germinating.

If you have collect bur oaks, plant them out immediately into some nice garden soil. Bur oaks, as with many members of the white oak group, begin their germination process in the warm fall soils. The acorns should be planted at a depth of about three times their diameter and I recommend placing some chicken wire over the acorns to keep the squirrels from digging them up. Water the soil and add a thin layer of mulch or straw. Red oaks, and other members of the red oak group such as pin oak, need to go through a cold treatment first so dry these remaining acorns with a paper towel seal them into a plastic bag and place them in the refrigerator. Plant these out into good garden soil next spring.

If you collect good acorns and follow these instructions you might achieve a 30 percent germination rate, meaning 3 trees from every 10 acorns planted.

E-samples

I also usually receive some "what is wrong with my apple" calls at this time of harvest. This is sooty blotch – great name, just makes you want to eat the fruit – a fungal disease (*Gloeodes pomigena*) that causes discoloration and blemishes on the fruit as it nears maturity. This is a disease that often occurs only on the interior or lower fruit as the cool, moist environment in the interior of the tree lends itself to the development of the fungus. The disease is more a problem with appearance than use and the

blotches can often be removed with washing and rubbing and the fruit still used for eating and cooking. Any fungicide application must be applied as the fruit was forming.

I also receive another e-sample of cottonwood leaves covered with reddish-brown to purple lesions that often have a yellow halo. The problem is marssonina leaf spot (*Marssonina brunnea*). This foliar fungal disease is more common on cultivars of cottonwood than the species. The disease can leave some almost completely defoliated by the end of August. This often weakens the trees, increasing winter injury and susceptibility to drought stress. A common control is to rake up and destroy any fallen leaves to reduce the population of overwintering fungi but this is of limited value and often impractical. Fungicide treatments may provide some control with the most common being applications of a fungicide containing chlorothalonil applied at bud-break. If the weather stays moist, applications may need to be continued on a 7 to 10-day cycle till the summer weather turns dry.

Samples received

Davison County **What is wrong with these apples?**

The dimpled apples are infested with apple maggot. Symptoms of a maggot infestation are dimpled, lumpy appearance to the surface of the apple and the flesh often turning mushy and containing brown trails or streaks. A sure sign of the pest is finding the small (1/4”), creamy white and legless larva in the fruit as well as their brown trails. The worm is leaving the fallen fruit to overwinter in the soils so the best control now is to pick up and destroy any damaged fruit. This insect is best managed with insecticide sprays beginning about the 4th of July, not spring as with many other insects, as the adults does not fly until the new crop of apples are developing. I also found apple scab on the Honeycrisp, not very much but not too surprising considering the wet year we had. I doubt this level would warrant control next season. The Gala and Fuji apple tree problems probably are winter related as these trees are only reliable hardy to -20^{o}F and we sure experience cold near or below that threshold last winter! Golden Delicious also has hardiness problems in our state.

McCook County **What is wrong with these pines?**

I suspected another problem when I first saw the pictures but the sample clearly shows a lot of injury due to diplodia tip blight. Many of the shoots send in the box (and thanks for the large sample) where stunted and it appears from the older growth that this infection has been serious for some time. I do not know if

the tree can be saved but the disease is managed with fungicide sprays containing chlorothalonil in the spring with the first spray applied just as the buds expand, a difficult event to time, and the second about 10-days later

Minnehaha County **What is wrong with these two maples? One of Brian's trees has reddish leaves all summer but the other is variegated. These trees have discolored leaves. The trunks are also buried and he is wondering if the soil is removed around the base will the trees recover.**

These two trees are cultivars of Norway maple (*Acer platanoides*). The reddish one is the 'Crimson King' and the other "Drummondi'. Norway maple is not well adapted to our state and while I can find beautiful specimens, even out to White River, there are many that suffer dieback due to our winter cold. These trees are also infected with the foliage disease maple anthracnose and with the wet spring and summer there are lots of Norway maples with brown leaves! Norway maples are prone to developing stem girdling roots, particularly when planted too deep and this problem also results in dieback and decline. Exposing the lower trunk may help but if there are already roots girdling the trunk it may be too late.

Minnehaha County **What is wrong with Roger's honeylocust?**

The tree has nectria canker. Trees infected with this disease often produce yellowing foliage that falls prematurely (though these symptoms can also be associated with mites and a number of other pests) and the branches and trunk will have slightly sunken cankers that often have a reddish stain to them. The disease often gets its start in the crotches of the branches where they attach to the trunk. There is not much that can be done to manage this disease and it seems to be more of a problem the further west honeylocust is planted in the state, most likely due to the harsher growing conditions increasing susceptibility to the disease.